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| APPLICATION NO.                      | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------|-------------|----------------------|---------------------|------------------|
| 09/583,952                           | 05/31/2000  | Kousuke Anzai        | 566.38616X00        | 2316             |
| 20457                                | 7590        | 12/29/2004           | EXAMINER            |                  |
| ANTONELLI, TERRY, STOUT & KRAUS, LLP |             |                      | LE, BRIAN Q         |                  |
| 1300 NORTH SEVENTEENTH STREET        |             |                      | ART UNIT            |                  |
| SUITE 1800                           |             |                      | PAPER NUMBER        |                  |
| ARLINGTON, VA 22209-9889             |             |                      | 2623                |                  |

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/583,952

Applicant(s)

ANZAI ET AL.

Examiner

Brian Q Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08/05/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-22, 24-26 is/are rejected.
- 7) ☒ Claim(s) 15 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### Response to Amendment and Arguments

1. Applicant's amendment filed 08/05/2004, has been entered and made of record.
2. The Examiner called Mr. Bailey to schedule the interview prior the write up of this Office Action. However, Mr. Bailey failed to return phone calls from the Examiner. Thus, the interview was not granted.
3. Regarding the rejection of claims 1-4, 9-12, and 17-20 under 35 U.S.C 112, first paragraph, the locations listed by the Application in the original disclosure (page 13, lines 1-12, page 20, lines 5-page 21, line 4, and Fig. 8) do not show support for the concept of "said location of said areas G thus located repeatedly **being independent of** said digital watermark (emphasis added) information.
4. Applicant's arguments with regard to claims 1-2, 4-6, 8-10, 12-14, 16-18, 20-22, and 24-26 have been fully considered, but are not considered persuasive because of the following reasons:

The Applicant discusses (pages 21-24) the disadvantages of Miyahara's references over the Application. However, the rejections are rejected based upon the broadest possible interpretations. Thus, the advantages of the Application will not be considered unless they are claimed. Regarding claims 1-2, 9-10, 17-18, the Applicant argues (page 24) that Miyahara does not teach areas G thus located repeatedly being independent of said digital watermark information. First, the limitation was claimed broadly and thus opened to subjective interpretations. Second, Miyahara teaches areas G can be located repeatedly (water mark pattern area of FIG. 3 which consists of  $P \times Q$  ( $P, Q$  greater or equal 1)) (column 5, lines 41-44) being

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independent of (not changed) of said digital watermark information (fixed-length code of watermark) (column 6, lines 65-67 to column 7, lines 1-11 and column 14, lines 22-35).

Regarding claims 4, 8, 12, 16, 20 and 24, the Applicant argues (bottom of page 24) that Miyahara does not disclose where each of the areas G includes the areas  $H_1$ -  $H_m$  which have been predetermined in a location so as to be asymmetric in vertical and horizontal directions in the area G. However, Miyahara clearly teaches this limitation (FIG. 3) area G (the overall picture 8 x 6 and 8 x 4) includes the areas  $H_1$ -  $H_m$  (the 8 x 8 block areas) which have been predetermined in a location so as to be asymmetric in vertical and horizontal directions (pre-arranged by the watermark pattern in the which clearly is not symmetrical/asymmetric in vertical or horizontal directions by Miyahara on FIG. 3) in the area G.

Thus, the rejections of all of the claims are maintained.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-4, 9-12, and 17-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The concept of "said location of said areas G thus located repeatedly **being independent of** said digital watermark information" does not have the support in the original disclosure. The Applicant is invited to

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point out the exact location (page number and line number) in the original disclosure to show this limitation.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2, 4-6, 8-10, 12-14, 16-18, 20-22, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyahara U.S. Patent No. 6,341,350.

Referring to claim 1, Miyahara teaches a method embedding digital watermark information (Abstract, first 6 lines)  $b_1 - b_n$  ( $2 \leq n$ ) in image data, comprising steps of:

Dividing the image data into a plurality of areas S (The whole figure,  $6 \times 4$ ) each consisting of  $M \times N$  ( $1 \leq M, N$ ) pixels (FIG. 3);

Defining an area G ( $8 \times 8$  block) consisting of  $P \times Q$  ( $1 \leq P, Q$ ) of the areas S (FIG. 3);

Allocating each of the areas S constituting said area G to some one of: areas  $T_1 - T_n$  whose pixel values are changed (the gray blocks) and areas  $H_1 - H_m$  ( $1 \leq m$ ) whose pixel values are not changed (the white blocks)(FIG. 8) (code bit string or code bit pattern within image data where some areas of the image will be embedded/changed with watermarking with bit of information 0 and 1 and other area will be remained with regular data of the image with also bit information 0 and 1) (FIG. 3; FIG. 6, "code bit string"; FIG. 8; FIG. 10; FIG. 11; FIG. 12, S42; S44; FIG. 13);

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Corresponding each of said  $T_1$ - $T_n$  whose pixel values are changed, to each of said digital watermark information  $b_1 - b_n$  and changing the pixel value of each area  $T$  according to a bit value (FIG. 2, "Accompanying Information Signal P", element 11, element 101);

Locating one or more areas  $T$  and one or more areas  $H$  in a predetermined arrangement in said area  $G$  (watermark pattern is a predetermined arrangement) (FIG. 8); and

Locating the plurality of areas  $G$  in a predetermined rule (column 5, lines 31-44).

However, Miyahara does not explicitly teach the method of locating said area  $G$  repeatedly wherein said location of said areas  $G$  thus located repeatedly is not dependent on said digital watermark information. However as disclosed in the prior art section/background of the invention, there is an existed method discloses by Miyahara wherein a repeated area pattern of locations is not dependent on said digital watermark information (column 6, lines 65-67 and column 7, lines 1-11) (please refer back to "Response to Amendment and Arguments" for further discussion). Modifying Miyahara's method of embedding digital watermark information in image data according to prior teachings would be able to prevent the original signal information from being changed by the digital watermark information. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Miyahara.

For claim 2, please refer for claim 1 for the explanation. Furthermore, Miyahara discloses areas  $J_1 - J_k$  ( $1 \leq k$ ) in which information  $p_1 - p_k$  ( $1 \leq k$ ) specifying an embedding format for embedding said digital watermark information  $b_1 - b_n$  in said areas  $T_1 - T_n$ , and areas  $H_1 - H_m$  (a block where code image data is located) (column 7, lines 45-46 and column 19, lines 10-13).

Regarding claim 4, Miyahara teaches the method of embedding digital watermark information wherein each of said areas G includes a plurality of said areas H that have been allocated so as to be asymmetric (FIG. 3) in vertical and horizontal directions in the area G (please refer back to "Response to Amendment and Arguments" for further discussion).

For claim 5, please refer to claim 1 for the explanation. In addition, Miyahara teaches the method of extracting digital watermark information (the detection of watermarking by using decoder and detector) (FIG. 32, elements 21 and 22) and the extracting the digital watermark information b1- bn from the recognized areas T1 – Tn (FIG. 14, S64 and S66).

Regarding claim 6, please refer back to claim 2 for the explanation. Also, Miyahara discloses the method wherein recognizing the embedding format of the digital watermark information and extracting the digital watermark information according to the recognized embedding format (formatter provides the format information so that the encoder/embeds watermark and decoder/extracts watermark information so that the encoder and the decoder would have the same format configuration) (column 20, lines 24-27).

For claim 8, please refer back to claims 4 and 1 for the explanation. Plus, Miyahara teaches contents of image processing carried out on the image data are judged (column 13, lines 60-63)

For claim 9, please refer to claim 1. Also, Miyahara teaches a program (column 20, line 61) product and a computer reader storage medium (column 9, lines 48-50).

For claim 10, please refer back to claim 2 and claim 9 respectively for the explanation.

For claim 12, please refer back to claim 4 and claim 9 respectively for the explanation.

Regarding claim 13, please refer to claim 1 and claim 9 for the explanation.

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For claim 14, please refer back to claim 6 and claim 9 for the explanation.

For claim 16, please refer back to claims 8 and 9 respectively for the explanation.

For claim 17, please refer to claim 1 for the explanation.

Regarding claim 18, please refer to claim 2 for the explanation.

Regarding claim 20, please refer back to claim 4 for the explanation.

Regarding claim 21, please refer back to claim 1 for the explanation.

Regarding claim 22, please refer back to claim 6 for the explanation.

Regarding claim 24, please refer back to claim 8 for further explanation.

Regarding claim 25, please refer to claim 2 for the explanation. Also, Miyahara teaches the processor (column 6, lines 42) and storage unit (column 20, line 65).

For claim 26, please refer back to claim 22 and claim 25 for the explanation.

#### ***Allowable Subject Matter***

9. Claims 3, 7, 11, 15, 19, and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Contact Information***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 703-305-5083. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5397 for regular communications and 703-308-5397 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

BL  
December 21, 2004



**SAMIR AHMED  
PRIMARY EXAMINER**